



Science
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Statistics Division

Division de la statistique
des sciences et de
la technologie



Canada

SCIENTIFIC ACTIVITIES OF THE
GOVERNMENT OF
SASKATCHEWAN

1983-84 Survey Results

A report prepared by:

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FOREWORD

This report presents a summary of the results of the tenth survey of scientific activities of the government of Saskatchewan. The survey was conducted the week of May 28, by Lloyd Lizotte and Heather Prieur of Statistics Canada, with the co-operation and assistance of Mr. Dale Botting, Mr. Dale Butler and Ms. Deborah DesRivières, of the Department of Science and Technology.

The first surveys of government scientific activities at the provincial level were conducted in the provinces of Ontario, Alberta and Nova Scotia in 1974; Saskatchewan was included in 1975, British Columbia in 1977 and New Brunswick in 1984. Reports for other province, similar to this one, are available on request from the representatives identified at the end of this report.

Surveys of the scientific activities of provincial governments serve several purposes. They provide an essential data base for analysis and the formulation of provincial science policy. They also provide data for the development of a national aggregate R&D series. National aggregates are published by Statistics Canada in many of the publications listed at the end of the report. The national aggregates are also needed to complete the international questionnaires for the Organization for Economic Co-operation and Development (OECD) and the United Nations Education, Science and Culture Organization (UNESCO).

The 1984 survey of Saskatchewan provincial government activities has produced reasonable indicators of scientific involvement at the department or agency level. This success is largely due to the goodwill and efforts of officials of the responding departments. The assistance provided by staff of the Department of Science and Technology is most gratefully acknowledged and appreciated by Statistics Canada.

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Statistical Tables

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Historical Series 1977-78 to 1984-85:

Total Expenditures:						
by Activity	1	10	21	30	41	52
by Department or Agency	2	11	22	31	42	53
by Performer	3	12	23	32	43	54
Current Expenditures on R&D:						
by Department or Agency	4	13	24	33	44	55
by Performer	5	14	25	34	45	56
Departmental Personnel Engaged in Scientific Activities, by Activity and Category	6	15	26	35	46	57

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	All Sciences		Natural Sciences		Social Sciences	
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<u>Expenditures in 1983-84 Fiscal Year:</u>						
Total Expenditures:						
by Sources of Funds	7	16				
by Activity and Performer	8	17	27	36	47	58
by Department or Agency and Performer	9	18	28	37	48	59
Current Expenditures by Department or Agency and Activity	10	19	29	38	49	60
Current Expenditures on R&D by Department or Agency and Performer	11	20	30	39	50	61
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Departmental Personnel Engaged in Scientific Activities, by Department or Agency	13	22	32	41	52	63
Objectives of Expenditures:						
by Department or Agency	14	23	33	42	53	64
by Activity	15	25	34	43	54	65
<u>Estimates for 1984-85 Fiscal Year:</u>			35	46	55	67
Total Expenditures:						
by Activity and Performer	16	26	36	47	56	68
by Department or Agency and Performer	17	27	37	48	57	69
Current Expenditures by Department or Agency and Activity	18	not available	38	49	58	not available
Current Expenditures on R&D by Department or Agency and Performer	19	28	39	50	59	70
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The following symbols are used in this report:

- nil or zero

... figures are not available or not applicable

(r) revised figures

(e) estimated figures

(1) Includes Vote 35 to the Saskatchewan Research Council

HIGHLIGHTS

Approximately 1.3% of the estimated 1983-84 budgetary expenditures of the government of Saskatchewan was spent on scientific activities. While total expenditures for 1983-84 increased by 7.1%, scientific expenditures rose by almost 22%.

TEXT TABLE I. Scientific Activities of the Government of Saskatchewan

Department or Agency	1982-83		1983-84	
	Expenditures	Scientific expenditures %	Estimated expenditures	Scientific expenditures %
	(\$ millions)		(\$ millions)	
Agriculture	86.2	7.6	93.7	8.6
Energy & Mines	74.6	3.6	49.8	6.8
Health	732.9	6.0	977.8	9.0
Highways & Transportation	191.8	1.4	982.6	1.4
Parks & Renewable Resources	53.2	2.2	55.8	2.2
Social Services	443.6	1.6	304.3	1.8
Sub Total	1,582.3	22.4	1,708.3	29.8
Other	1,336.0	12.2	1,416.9	12.3
Total (1)	2,918.3	34.6	3,125.2	42.1
		1.2		1.3

TEXT TABLE II. Total Expenditures on Scientific Activities, by Science Type 1977-78 to 1984-85

Science type	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85 (e)
(\$'000)								
Natural	11,197	14,972	19,146	17,456	19,298	24,333	30,542	36,084
Social	6,601	7,611	8,116	10,616	10,364	10,254	11,549	14,831
Total (1) ...	17,798	22,583	27,262	28,072	29,662	34,587	42,091	50,915

Of the total 1983-84 Saskatchewan government science expenditures, 73% (\$30.5 million) are for natural science activities. Research and development account for \$16.1 million (53%) of this amount. The remaining \$14.4 million is spent on related scientific activities. Major support of research and development comes from the departments of Agriculture, Energy & Mines and Health as well as the Saskatchewan Research Council. The special services and studies activity is the major related scientific activity, supported mainly by the departments of Health and Energy & Mines.

Social science activities account for 27% (\$11.5 million) of the total 1983-84 Saskatchewan government science expenditure. Ninety two percent of this is spent on related scientific activities. The departments of Justice, Social Services and Health are the major supporters of social science activities.

Note: In this report the scientific expenditures of the Saskatchewan Research Council reflect only the yearly grant from the Saskatchewan Government (Vote 35). Additional information on the SRC is available in Science Statistics, Catalogue No. 88-001, Vol. 8, No. 11.

Text Table III. Total Expenditures on Scientific Activities, by Sector of Performance, 1983-84

Activity	Intramural	Industry	University	Hospitals & health organizations	Saskatchewan Research Council (1)	Other	Total
Research & development	3,765	3,379	5,570	189	3,908	229	17,040
Related scientific activities ..	20,785	2,122	838	14	319	973	25,051
Total	24,550	5,501	6,408	203	4,227	1,202	42,091

The provincial government itself performed 58% of the scientific activities in 1983-84. Most of the RSA funded by the provincial government is performed in house. However, only 22% of the R&D is performed by the government itself. The University sector is the largest extramural performer (15%) followed closely by Industry (13%) and the Saskatchewan Research Council (10%).

Text Table IV. Total Expenditures on Scientific Activities, by Source of Funds, 1983-84

Department or Agency	Departmental budget	Transfer from other departments	Federal Government	Trust fund	Other sources	Total(1)
Agriculture	8,153	-	11	-	443	9,607
Energy & Mines ...	2,383	-	2,259	-	2,184	6,826
Health	7,631	-	233	182	988	9,044
Total	34,915	356	2,535	185	4,100	42,091

The primary source of funds is the provincial departmental budgets, accounting for 83% of total science expenditure.

Text Table V. Departmental Personnel Engaged in Intramural Science Activities, by Science Type and Category, 1983-84

Science type and activity	Scientific & professional		Technical		Other		Total	
	Number	%	Number	%	Number	%	Number	%
Natural Sciences:								
R&D	37	48	36	47	4	5	77	100
RSA	84	29	160	56	42	15	286	100
Total	121	33	196	54	46	13	363	100
Social Sciences:								
R&D	10	91	1	9	-	-	11	100
RSA	129	58	23	11	69	31	221	100
Total	139	60	24	10	69	30	232	100
Total	260	44	220	37	115	19	595	100

Of the total Saskatchewan government employees, 595 person-years (4.2%) are devoted to science activities. The scientific and professional category accounts for 44%, technical personnel constitute 37% and other support staff the remaining 19%.

Text Table VI. Objective of Total Science Expenditures

Objective	1982-83		1983-84	
	(\$'000)	%	(\$'000)	%
Energy & fuels:				
Fossil fuels	1,781	5.1	3,672	8.7
Other	680	2.0	1,621	3.8
Environmental issues	2,204	6.4	1,514	3.6
Health	6,537	18.9	9,612	22.8
Industrial & economic development:				
Agriculture	7,620	22.0	9,161	21.8
Minerals	2,071	6.0	2,990	7.1
Other	4,844	14.0	4,348	10.3
Social development & related areas	6,671	19.3	6,420	15.3
Transportation	1,768	5.1	1,720	4.1
All Other	411	1.2	1,033	2.5
Total (1)	34,587	100.0	42,091	100.0

Almost one half of the money spent on natural science activities in 1983-84 was for Agriculture and Health. The major objective in the social sciences is Social development & related areas. Overall, \$9.6 million was directed to Health, \$9.2 million to Agriculture, \$5.3 million to Energy & fuels, \$7.3 million to Industrial & economic development (excluding Agriculture), \$6.4 million to Social development & related areas and \$4.3 to all other areas.



Government of Saskatchewan

TABLE 1. Total Expenditures in All Sciences, by Activity, 1977-78 to 1984-85

Activity	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
	(\$'000)							
Research & development:								
Current expenditures:								
In-house	2,014	2,038	2,478	2,626	2,633	2,816	3,188	3,547
Contracts	617	488	466	362	354	766	3,795	7,041
Grants (1)	3,764	6,827	9,819	7,838	7,919	8,637	9,853	15,020
Research fellowships	15	15	34	38	20	71	122	169
Sub-total	6,410	9,368	12,797	10,864	10,926	12,290	16,958	25,777
Capital expenditures	119	48	97	253	203	99	82	686
Related scientific activities:								
Current expenditures	11,007	12,695	13,934	16,637	18,355	21,958	24,894	23,928
Capital expenditures	262	472	434	318	178	240	157	524
Total (1)	17,798	22,583	27,262	28,072	29,662	34,587	42,091	50,915

Government of Saskatchewan

TABLE 2. Total Expenditures in All Sciences by Department or Agency, 1977-78 to 1984-85

Department or Agency	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
	(\$'000)							
Advanced Education & Manpower	1,423	2,035	2,221	2,121	2,249	2,361	170	80
Agriculture	2,031	2,993	2,329	2,512	4,768	7,566	8,607	6,948
Archives Board	370	487	521	722	772	872	1,002	955
Cancer Foundation	...	...	...	...	...	241	282	425
Consumer and Commercial Affairs	81	10	6	2	...	75	75	100
Co-operation & Co-op Dev't ..	149	323	443	529	168	...	219	235
Culture & Recreation	782	487	550	624	860	304	358	376
Economic Dev't & Trade	...	...	...	...	...	...	556	876
Education	137	101	61	177	149	197	158	180
Energy & Mines	1,776	5,127	8,946	5,052	2,820	3,623	6,826	7,915
Environment	169	77	78	517	737	991	687	1,094
Executive Council	192	202	213	121	129	201	131	146
Finance	30	41	42	...	...	...	...	...
Government Insurance Corp ...	52	35	55	57	62	...	...	...
Health	3,472	4,161	4,461	6,446	6,608	6,686	9,044	8,995
Highway Traffic Board	156	120	50	178	97	127	90	99
Highways & Transportation ...	1,125	909	867	996	1,056	1,443	1,415	1,417
Indian & Native Affairs Sec	...	...	...	...	...	...	188	188
Industry & Commerce	597	424	446	625	522	758	1,295	1,360
Justice	...	...	...	...	...	...	675	623
Labour	411	458	458	458	655	694	...	...
Municipal Affairs	260	260	...	...	...	...	...	...
Northern Saskatchewan	601	282	303	354	454	...	...	...
Parks & Renewable Resources	...	...	...	...	...	...	...	...
Revenue & Financial Services	...	...	...	...	...	2,208	2,236	2,581
Rural Development	...	...	...	...	...	166	110	160
Saskatchewan Crop Ins Corp ..	135	...	...	146	130	...	205	199
Saskatchewan Housing Corp ...	132	205	...	...	...	...	...	...
Science & Technology	...	...	198	...	...	...	...	...
Social Services	724	794	...	...	...	...	...	...
Supply & Services	...	...	...	...	...	...	...	...
Tourism & Renewable Resources	219	...	...	...	...	...	652	6,038
Tourism & Small Business	...	...	...	...	...	...	1,824	3,147
Iptn Agency of Saskatchewan	199	301	311	...	1,782	...	860	1,869
Urban Affairs	...	...	269	747	761	794	...	...
Total (1)	17,798	22,583	27,262	28,072	29,662	34,587	42,091	50,915

Government of Saskatchewan

TABLE 3. Total Expenditures in All Sciences by Performer, 1977-78 to 1984-85

Performer	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
	(\$'000)							
Intramural	10,502	12,340	13,690	16,062	16,068	19,198	24,550	25,414
Industry	1,186	2,948	6,531	4,180	2,294	3,358	5,501	9,218
Universities	2,197	3,871	3,644	3,482	5,929	6,959	6,408	7,952
Hospitals & health organizations	207	250	250	1,150	1,057	140	203	228
Saskatchewan Research Council (1)	3,422	2,898	2,934	2,830	3,786	3,869	4,227	6,110
Other	284	276	213	368	528	1,063	1,202	1,993
Total	17,798	22,583	27,262	28,072	29,662	34,587	42,091	50,915

Government of Saskatchewan

TABLE 4. Current Expenditures on R&D in All Sciences, by Department or Agency, 1977-78 to 1984-85

Department or Agency	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
	(\$'000)							
Advanced Education & Manpower	42	37	28	32	20	21	...	...
Agriculture	1,321	2,470	1,572	2,075	4,072	4,922	4,654	5,195
Archives Board	32	101	107	32	...	...	...	...
Cancer Foundation	...	...	...	...	...	182	259	395
Co-operation & Co-op Dev't ..	...	...	60	1,144	...	...	...	...
Consumer & Commercial	...	...	...	...	...	...	...	...
Affairs	...	...	...	...	...	12	12	...
Culture & Recreation	87	125	131	135	160	65	18	35
Education	40	...	...	...	...	...	...	...
Energy & Mines	211	2,530	6,067	1,994	78	522	3,320	5,555
Environment	111	...	...	...	...	134	50	200
Executive Council	55	64	67	61	65	...	65	73
Government Insurance Corp ...	43	32	53	54	57	...	...	...
Health	983	946	1,299	2,493	2,220	1,691	2,543	2,463
Highway Traffic Board	35	34	15	50	...	...	...	...
Highways & Transportation ...	253	181	219	147	197	250	257	240
Industry & Commerce	33	44	133	382	99	344	...	...
Northern Saskatchewan	407	82	88	4	...	...	...	...
Parks & Renewable Resources	...	...	...	...	...	536	1,021	1,005
Saskatchewan Housing Corp ...	...	...	...	...	44	...	...	...
Science & Technology	...	...	...	...	...	...	450	4,494
Social Services	12	12	26	33	...	92	133	1,141
Supply & Services	...	...	...	...	...	...	290	649
Tourism & Renewable Resources	158	175	316	535	848	...	...	...
Tourism & Small Business	...	...	...	...	...	...	10	63
Tptn Agency of Saskatchewan	12	17	17	5	1	...	...	...
Total (1)	6,410	9,368	12,797	10,864	10,926	12,290	16,958	25,777

Government of Saskatchewan

TABLE 5. Current Expenditures on R&D in All Sciences, by Performer, 1977-78 to 1984-85

Performer	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85(e)
	(\$'000)							
Intramural	2,044	2,049	2,550	2,659	2,633	2,828	3,683	4,534
Industry	29	2,098	5,824	2,494	454	846	3,379	6,497
Universities	955	2,060	1,354	1,696	3,705	4,683	5,570	7,238
Hospitals & health organizations	207	250	250	1,150	796	119	189	216
Saskatchewan Research Council (1)	3,016	2,661	2,685	2,728	3,218	3,555	3,908	5,877
Other	159	250	134	137	120	259	229	1,415
Total	6,410	9,368	12,797	10,864	10,926	12,290	16,958	25,777

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TABLE 6. Departmental Personnel Engaged in All Scientific Activities, by Activity and by Category, 1977-78 to 1984-85

Activity and category	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
(person-years)								
Research & development:								
Scientific & professional ...	45	49	63	57	44	49	47	66
Technical	25	29	41	41	42	40	37	40
Other	8	9	12	15	11	8	4	8
Sub-total	78	87	116	113	97	97	88	114
Related scientific activities:								
Scientific & professional ...	151	162	183	151	157	192	213	220
Technical	146	110	111	124	108	170	183	137
Other	77	76	93	105	91	89	111	110
Sub-total	374	348	387	380	356	451	507	467
Total science activities:								
Scientific & professional....	196	211	246	208	201	241	260	286
Technical	171	139	152	165	150	210	220	177
Other	85	85	105	120	102	97	115	118
Total	452	435	503	493	453	548	595	581

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TABLE 7. Total Expenditures in All Sciences, by Sources of Funds, 1983-84

Department or Agency	Departmental budget	Transfers from other departments	From Trust Funds	Transfers from federal government	From other sources	Total
	(\$'000)					
Advanced Education & Manpower ..	170	-	-	-	-	170
Agriculture	8,153	-	-	11	443	8,607
Archives Board	943	31	3	-	25	1,002
Cancer Foundation	282	-	-	-	-	282
Consumer & Commercial Affairs ..	75	-	-	-	-	75
Co-operation & Co-op Dev't	219	-	-	-	-	219
Culture & Recreation	349	-	-	9	-	358
Economic Dev't & Trade	556	-	-	-	-	556
Education	138	-	-	-	-	138
Energy & Mines	2,383	-	-	20	-	2,403
Environment	687	-	-	2,259	2,184	6,826
Executive Council	128	-	-	-	-	128
Health	7,631	-	-	3	-	7,634
Highway Traffic Board	90	-	182	233	998	1,415
Highways & Transportation	1,415	-	-	-	-	1,415
Indian & Native Affairs Secr't ..	188	-	-	-	-	188
Justice	1,295	-	-	-	-	1,295
Labour	675	-	-	-	-	675
Parks & Renewable Resources	2,136	100	-	-	-	2,236
Revenue & Financial Services ..	110	-	-	-	-	110
Rural Development	205	-	-	-	-	205
Science & Technology	202	-	-	-	-	202
Social Services	1,799	25	-	-	450	2,274
Supply & Services	660	200	-	-	-	860
Tourism & Small Business	90	-	-	-	-	90
Urban Affairs	460	-	-	-	-	460
Total	34,915(1)	356	185	2,535	4,100	42,091(1)

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TABLE 8. Total Expenditures in All Sciences, by Activity and Performer, 1983-84

Activity	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
(\$'000)							
Research and development:							
Current expenditures:							
In-house	3,188	...	...	...	...	...	3,188
Contracts	247	3,341	137	-	17	53	3,795
Grants	248	38	5,322	178	3,891(1)	176	9,853
Research fellowships	-	-	111	11	-	-	122
Sub-total	3,683	3,379	5,570	189	3,908	229	16,958
Capital expenditures	82	...	...	...	...	...	82
Related scientific activities:							
Current expenditures	20,628	2,122	838	14	319	973	24,894
Capital expenditures	157	...	...	...	...	...	157
Total	24,550	5,501	6,408	203	4,227	1,202	42,091

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TABLE 9. Total Expenditures in All Sciences, by Department or Agency and Performer, 1983-84

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
(\$'000)							
Advanced Education & Manpower ..	170	-	-	-	-	-	170
Agriculture	3,924	225	4,172	-	21	265	8,607
Archives Board	1,002	-	-	-	-	-	1,002
Cancer Foundation	279	-	3	-	-	-	282
Consumer & Commercial Affairs ..	50	-	25	-	-	-	75
Co-operation & Co-op Dev't	85	-	130	-	-	4	219
Culture & Recreation	342	-	9	-	2	5	358
Economic Dev't & Trade	84	472	-	-	-	-	556
Education	54	35	69	-	-	-	158
Energy & Mines	2,554	3,532	120	-	289	331	6,826
Environment	404	134	96	-	20	33	687
Executive Council	131	-	-	-	-	-	131
Health	7,695	-	1,204	105	-	40	9,044
Highway Traffic Board	90	-	-	-	-	-	90
Highways & Transportation	1,271	67	59	-	1	17	1,415
Indian & Native Affairs Sec't ..	20	68	-	-	-	100	188
Justice	1,295	-	-	-	-	-	1,295
Labour	650	-	25	-	-	-	675
Parks & Renewable Resources	1,993	200	15	-	8	20	2,236
Revenue & Financial Services ...	46	64	-	-	-	-	110
Rural Development	52	153	-	-	-	-	205
Science & Technology	114	79	456	-	-	3	652
Social Services	1,341	57	-	98	-	328	1,824
Supply & Services	680	180	-	-	-	-	860
Tourism & Small Business	-	80	-	-	10	-	90
Urban Affairs	224	155	25	-	-	56	460
Total	24,550	5,501	6,408	203	4,227(1)	1,202	42,091(1)

Government of Saskatchewan

TABLE 10. Current Expenditures in All Sciences, by Department or Agency and Activity, 1983-84

Department or Agency	Research & development	Related scientific activities	Total
(\$'000)			
Advanced Education	-	170	170
Agriculture	4,654	3,953	8,607
Archives Board	-	916	916
Cancer Foundation	259	259	259
Consumer & Commercial Affairs ..	12	63	75
Co-operation & Co-op Dev't	-	219	219
Culture & Recreation	18	315	333
Economic Dev't & Trade	-	556	556
Education	-	158	158
Energy & Mines	3,320	3,506	6,826
Environment	50	637	687
Executive Council	65	66	131
Health	2,543	6,457	9,000
Highway Traffic Board	-	90	90
Highways & Transportation	257	1,158	1,415
Indian & Native Affairs Secr't ..	-	188	188
Justice	-	1,295	1,295
Labour	-	675	675
Parks & Renewable Resources	1,021	1,200	2,221
Revenue & Financial Services ...	-	110	110
Rural Development	-	199	199
Science & Technology	450	202	652
Social Services	133	1,691	1,824
Supply & Services	290	530	820
Tourism & Small Business	10	80	90
Urban Affairs	-	460	460
Total	16,958(1)	24,894	41,852(1)

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TABLE 11. Current Expenditures on R&D in All Sciences, by Department or Agency and Performer, 1983-84

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
(\$'000)							
Agriculture	294	56	4,110	-	21	173	4,654
Cancer Foundation	256	-	3	-	-	-	259
Consumer & Commercial Affairs ..	-	-	12	-	-	-	12
Culture & Recreation	18	-	-	-	-	-	18
Energy & Mines	217	3,103	-	-	-	-	3,320
Environment	-	-	50	-	-	-	50
Executive Council	65	-	-	-	-	-	65
Health	1,561	-	891	91	-	-	2,543
Highways & Transportation	200	-	39	-	1	17	257
Parks & Renewable Resources	842	160	15	-	-	4	1,021
Science & Technology	-	-	450	-	-	-	450
Social Services	-	-	-	98	-	35	133
Supply & Services	230	60	-	-	-	-	290
Tourism & Small Business	-	-	-	-	10	-	10
Total	3,683	3,379	5,570	189	3,908(1)	229	16,958(1)

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TABLE 12. Detail of Intramural Expenditures in All Sciences, by Department or Agency and Expenditure, 1983-84

Department or Agency	Current expenditures		Capital expenditures	Total
	Personnel costs	Other costs		
(\$'000)				
Advanced Education & Manpower ..	122	48	-	170
Agriculture	2,870	1,054	-	3,924
Archives Board	726	190	86	1,002
Cancer Foundation	227	29	23	279
Consumer & Commercial Affairs ..	40	10	-	50
Co-operation & Co-op Dev't	80	5	-	85
Culture & Recreation	264	53	25	342
Economic Dev't & Trade	84	-	-	84
Education	44	10	-	54
Energy & Mines	1,867	687	-	2,554
Environment	257	147	-	404
Executive Council	95	36	-	131
Health	5,581	2,070	44	7,695
Highway Traffic Board	89	1	-	90
Highways & Transportation	890	381	-	1,271
Indian & Native Affairs Secr't ..	20	-	-	20
Justice	1,145	150	-	1,295
Labour	462	188	-	650
Parks & Renewable Resources	1,340	638	15	1,993
Revenue & Financial Services ..	46	-	-	46
Rural Development	35	11	6	52
Science & Technology	58	56	-	114
Social Services	1,060	281	-	1,341
Supply & Services	600	40	40	680
Urban Affairs	224	-	-	224
Total	18,226	6,085	239	24,550

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TABLE 13. Departmental Personnel Engaged in All Scientific Activities, by Department or Agency, 1983-84

Department or Agency	Research & development			Related scientific activities			
	Scientific & professional	Technical	Other	Total	Scientific & professional	Technical	Other
(person-years)							
Advanced Education & Manpower	-	-	-	-	3	1	1
Agriculture	8	-	-	8	31	43	9
Archives Board	-	-	-	-	12	4	12
Cancer Foundation	-	8	-	8	-	-	-
Consumer & Commercial Affairs ..	-	-	-	-	1	-	-
Co-operation & Co-op Dev't	-	-	-	-	2	-	-
Culture & Recreation	-	-	-	-	6	4	2
Economic Dev't & Trade	-	-	-	-	3	-	-
Education	-	-	-	-	1	-	-
Energy & Mines	2	-	1	3	26	15	11
Environment	2	-	-	3	3	5	1
Executive Council	16	1	2	36	1	2	-
Health	-	18	-	-	40	67	48
Highway Traffic Board	-	-	-	-	2	-	1
Highways & Transportation	2	3	1	6	3	25	1
Indian & Native Affairs Secr't ..	-	-	-	-	1	-	-
Justice	-	-	-	-	18	-	10
Labour	-	-	-	-	9	-	5
Parks & Renewable Resources	12	7	-	19	12	10	2
Revenue & Financial Services ...	-	-	-	-	2	-	-
Rural Development	-	-	-	-	-	1	-
Science & Technology	-	-	-	-	1	-	1
Social Services	-	-	-	-	21	3	7
Supply & Services	5	-	-	5	9	3	-
Urban Affairs	-	-	-	-	6	-	-
Total	47	37	4	88	213	183	111
							507

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TABLE 14. Objectives of Expenditures in All Sciences, by Department or Agency, 1983-84

Department or Agency	Advancement of Science	Energy & Fuels		Environ- mental Issues	Health	Industrial and economic development				Other
		Fossil fuels	other fuels			Agriculture	Fishes	Mfg	Minerals	
(\$'000)										
Advanced Education & Manpower ..	110	-	-	-	-	-	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-	-	-
Archives Board	-	-	-	-	-	8,607	-	-	-	-
Cancer Foundation	-	-	-	-	-	-	-	-	-	-
Consumer & Commercial Affairs ..	-	-	-	-	282	-	-	-	-	-
Co-operation & Co-op Dev't	-	-	-	-	25	-	-	-	-	-
Culture & Recreation	10	-	-	-	-	35	-	-	-	-
Economic Dev't & Trade	-	-	-	-	-	-	-	-	-	50
Education	-	-	-	-	-	-	-	-	-	-
Energy & Mines	-	3,672	-	-	-	-	-	556	-	-
Environment	-	-	927	-	-	-	-	-	-	-
Executive Council	131	-	-	666	-	-	-	-	2,227	-
Health	-	-	-	-	-	-	-	-	-	-
Highway Traffic Board	-	-	-	-	9,044	-	-	-	-	-
Highways & Transportation	-	-	-	-	-	-	-	-	-	-
Indian & Native Affairs Secr't ..	-	-	-	-	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-	-	-	-
Labour	-	-	-	-	-	-	-	-	-	-
Parks & Renewable Resources	-	-	-	-	-	-	-	-	-	-
Revenue & Financial Services	-	-	-	14	-	-	-	-	-	-
Rural Development	-	-	-	-	-	-	830	-	-	-
Science & Technology	114	-	450	-	-	-	-	-	-	637
Social Services	-	-	-	-	-	-	-	-	-	-
Supply & Services	-	-	-	-	251	-	-	88	-	-
Tourism & Small Business	-	-	-	10	-	15	-	-	-	-
Urban Affairs	-	-	-	-	-	-	10	-	15	350
Total	613(1)	3,672	1,621(1)	1,514(1)	9,612	9,161(1)	840	431	1,187(1)	2,990(1)
										1,890(1)

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TABLE 14. Objectives of Expenditures in All Sciences, by Department or Agency, 1983-84 - Concluded

Department or Agency	Social development & related areas				Transportation	Other	Total
	Culture, sport & recreation	Education	Human Resources	Urban & regional studies			
Advanced Education & Manpower ..	-	60	-	-	-	-	170
Agriculture	-	-	-	-	-	-	8,607
Archives Board	-	-	-	-	-	-	1,002
Cancer Foundation	-	-	-	-	-	-	282
Consumer & Commercial Affairs ..	-	-	-	-	-	-	75
Co-operation & Co-op Dev't	-	134	-	-	-	-	219
Culture & Recreation	-	-	-	-	-	-	358
Economic Dev't & Trade	-	-	-	-	-	-	556
Education	-	158	-	-	-	-	158
Energy & Mines	-	-	-	-	-	-	6,826
Environment	-	-	-	-	-	-	687
Executive Council	-	-	-	21	-	-	131
Health	-	-	-	-	-	-	9,044
Highway Traffic Board	-	-	-	-	-	-	90
Highways & Transportation	-	-	-	-	90	-	1,415
Indian & Native Affairs Sec'r't ..	-	-	-	-	-	-	1,415
Justice	-	-	-	-	-	-	188
Labour	-	-	-	-	-	-	1,295
Parks & Renewable Resources	-	-	675	-	-	-	675
Revenue & Financial Services	324	-	-	-	-	-	2,236
Rural Development	-	-	91	-	-	-	110
Science & Technology	-	-	-	-	205	-	205
Social Services	-	-	-	-	-	-	652
Supply & Services	-	-	-	-	-	-	1,824
Tourism & Small Business	80	-	-	40	10	420	860
Urban Affairs	100	50	-	212	-	-	90
Total	504	402	766	273	1,720	420	42,091(1)

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TABLE 15. Objectives of Expenditures in All Sciences, by Activity, 1983-84

Objective	Intramural		Extramural		Total
	Research & development	Related scientific activities	Research & development	Related scientific activities	
(\$'000)					
Advancement of science	75	290	248	-	613
Energy & fuels:					
Fossil fuels	217	49	3,103	303	3,672
Other	-	144	694	783	1,621
Environmental issues	14	446	786	268	1,514
Health	1,884	6,094	1,130	504	9,612
Industrial & economic development:					
Agriculture	299	3,675	4,994	193	9,161
Fisheries	414	412	14	-	840
Forestry	370	56	5	-	431
Manufacturing	-	84	543	560	1,187
Minerals	5	2,154	748	83	2,990
Other	108	689	953	140	1,890
Social development & related areas:					
Culture, sport & recreation	71	278	-	155	504
Education	-	139	-	263	402
Human resources	-	677	-	89	766
Urban & regional studies	10	124	-	139	273
Other	8	4,051	-	416	4,475
Transportation	200	1,223	57	240	1,720
Other	180	200	40	-	420
Total	3,855	20,785	13,315(1)	4,136	42,091(1)

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TABLE 16. Total Expenditures in All Sciences, by Activity and Performer, 1984-85(e)

Activity	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
(\$'000)							
Research and development:							
Current expenditures:							
In-house	3,547	...	...	...	...	...	3,547
Contracts	384	4,467	501	-	603	1,086	7,041
Grants	557	2,030	6,623	207	5,274(1)	329	15,020
Research fellowships	46	-	114	9	-	-	169
Sub-total	4,534	6,497	7,238	216	5,877	1,415	25,777
Capital expenditures	686	...	...	...	...	...	686
Related scientific activities:							
Current expenditures	19,670	2,721	714	12	233	578	23,928
Capital expenditures	524	...	...	...	...	...	524
Total	25,414	9,218	7,952	228	6,110	1,993	50,915

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TABLE 19. Current Expenditures on R&D in All Sciences, by Department or Agency and Performer, 1984-85(e)

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
	(\$'000)						
Agriculture	550	35	4,259	-	25	326	5,195
Cancer Foundation	395	-	-	-	-	-	395
Culture & Recreation	35	-	-	-	-	-	35
Energy & Mines	384	4,251	360	-	505	55	5,555
Environment	-	-	200	-	-	-	200
Executive Council	73	-	-	-	-	-	73
Health	1,442	-	906	75	40	-	2,463
Highways & Transportation	200	5	-	-	5	30	240
Parks & Renewable Resources	858	120	23	-	-	4	1,005
Science & Technology	54	2,000	1,490	-	950	-	4,494
Social Services	-	-	-	141	-	1,000	1,141
Supply & Services	543	86	-	-	20	-	649
Tourism & Small Business	-	-	-	-	63	-	63
Total	4,534	6,497	7,238	216	5,877(1)	1,415	25,777(1)

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TABLE 20. Departmental Personnel Engaged in All Scientific Activities, by Department or Agency, 1984-85(e)

Department or Agency	Research & development			Related scientific activities			
	Scientific & professional	Technical	Other	Total	Scientific & professional	Technical	Other
	(person-years)						
Advanced Education & Manpower ..	-	-	-	-	1	-	1
Agriculture	15	-	-	15	22	4	9
Archives Board	-	-	-	-	12	4	10
Cancer Foundation	-	10	-	10	-	-	-
Consumer & Commercial Affairs ..	-	-	-	-	1	-	-
Co-operation & Co-op Dev't	-	-	-	-	2	-	2
Culture & Recreation	-	-	-	-	6	4	1
Economic Dev't & Trade	-	-	-	-	4	-	4
Education	-	-	-	-	1	-	-
Energy & Mines	4	-	-	5	24	15	11
Environment	-	-	1	-	2	6	9
Executive Council	2	1	-	3	1	2	-
Health	15	20	3	38	35	60	47
Highway Traffic Board	-	-	-	-	2	-	1
Highways & Transportation	2	3	1	6	3	25	1
Indian & Native Affairs Secr't ..	-	-	-	-	1	-	-
Justice	-	-	-	-	18	-	10
Labour	-	-	-	-	8	-	5
Parks & Renewable Resources	13	6	1	20	12	10	5
Revenue & Financial Services ...	-	-	-	-	3	-	-
Rural Development	-	-	-	-	-	1	-
Science & Technology	1	-	-	1	9	-	4
Social Services	-	-	-	-	38	3	4
Supply & Services	14	-	2	16	9	3	-
Urban Affairs	-	-	-	-	6	-	-
Total	66	40	8	114	220	137	110
							467

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TABLE 21. Total Expenditures in the Natural Sciences, by Activity, 1977-78 to 1984-85

Activity	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
(\$'000)								
Research & development:								
Current Expenditures:								
In-house	1,437	1,194	1,465	1,688	1,951	2,688	2,748	2,834
Contracts	594	477	408	46	24	649	3,540	5,795
Grants(1)	3,699	6,827	9,819	6,851	7,644	8,418	9,646	14,626
Fellowships	-	-	14	21	-	50	122	102
Sub-total	5,730	8,498	11,706	8,606	9,619	11,805	16,056	23,357
Capital expenditures	119	48	96	245	203	99	82	136
Related scientific activities:								
Current Expenditures:								
Education support	78	12	33	32	226	162	101	123
Technical surveys	2,125	3,197	3,966	4,189	4,387	5,469	5,366	3,792
Information services	144	37	41	187	112	734	2,654	3,297
Special services & studies ..	2,601	2,542	2,750	3,528	3,893	5,807	6,106	5,045
Museum services	342	302	349	489	700	82	113	117
Sub-total	5,290	6,090	7,139	8,425	9,318	12,254	14,340	12,374
Capital expenditures	58	336	205	180	158	175	64	217
Total(1)	11,197	14,972	19,146	17,456	19,298	24,333	30,542	36,084

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TABLE 22. Total Expenditures in the Natural Sciences, by Department or Agency, 1977-78 to 1984-85

Department or Agency	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
	(\$'000)							
Agriculture	1,810	2,429	1,712	1,997	4,318	6,622	7,636	6,043
Cancer Foundation	...	...	...	...	...	241	282	425
Culture & Recreation	383	341	390	541	770	165	166	162
Energy & Mines	1,776	5,127	8,946	5,052	2,820	3,623	6,826	7,915
Environment	169	77	78	517	737	991	687	1,094
Government Insurance Corp	52	35	55	57	62	...	...	...
Health	2,422	2,654	2,750	3,760	4,661	4,987	6,379	6,128
Highways & Transportation	1,125	909	867	996	1,056	1,443	1,415	1,417
Industry & Commerce	33	84	164	382	99	368	...	...
Northern Saskatchewan	447	282	303	354	279	...	...	...
Parks & Renewable Resources	...	...	...	...	...	...	...	...
Rural Development	...	...	...	...	...	2,208	1,980	1,961
Science & Technology	...	...	...	...	...	166	205	199
Supply & Services	...	...	...	...	...	...	640	5,988
Tourism & Small Business	...	...	...	...	...	...	440	420
Tourism & Renewable Resources	206	215	971	1,012	1,405	...	...	...
Transportation Agency of Saskatchewan	199	301	311	60	26	...	...	...
Total (1)	11,197	14,972	19,146	17,456	19,298	24,333	30,542	36,084

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TABLE 23. Total Expenditures in the Natural Sciences, by Performer, 1977-78 to 1984-85

Performer	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
	(\$'000)							
Intramural	5,917	7,215	8,025	9,383	9,842	12,580	15,603	14,621
Industry	514	2,299	6,029	3,229	1,043	2,444	4,271	7,527
Universities	989	2,110	1,695	1,761	3,746	4,837	5,754	7,163
Hospitals & health organizations	200	250	250	200	880	21	88	62
Saskatchewan Research Council(1)	3,422	2,828	2,934	2,811	3,626	3,834	4,225	6,009
Other	155	270	213	72	161	617	601	702
Total	11,197	14,972	19,146	17,456	19,298	24,333	30,542	36,084

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TABLE 24. Current Expenditures on R&D in the Natural Sciences, by Department or Agency, 1977-78 to 1984-85

Department or Agency	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
(\$'000)								
Agriculture	1,296	2,429	1,548	1,997	4,036	4,879	4,554	5,095
Cancer Foundation	...	...	...	...	...	182	259	395
Culture & Recreation	10	39	41	52	70	52	10	15
Energy & Mines	211	2,530	6,067	1,994	78	522	3,320	5,555
Environment	111	...	...	...	...	...	50	200
Government Insurance Corp	43	32	53	54	57	...	...	...
Health	628	461	625	978	1,468	1,521	2,269	2,026
Highways & Transportation	253	181	219	147	197	250	257	240
Industry & Commerce	33	44	133	382	99	344	...	...
Northern Saskatchewan	407	82	88	4	...	...	...	...
Parks & Renewable Resources	...	...	...	...	...	536	931	935
Science & Technology	...	...	...	...	...	...	450	4,494
Supply & Services	...	...	...	...	...	...	70	70
Tourism & Renewable Sources	151	165	316	265	548	...	...	...
Tourism & Small Business	...	...	...	...	...	...	10	63
Tptn Agency of Saskatchewan	12	17	17	5	1	...	...	...
Total (1)	5,730	8,498	11,706	8,606	9,619	11,805	16,056	23,357

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TABLE 25. Current Expenditures on R&D in the Natural Sciences, by Performer, 1977-78 to 1984-85

Performer	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
	(\$'000)							
Intramural	1,439	1,194	1,479	1,688	1,951	2,700	3,243	3,791
Industry	29	2,098	5,824	2,239	154	846	3,249	6,361
Universities	940	2,045	1,334	1,679	3,524	4,524	5,380	6,880
Hospitals & health organizations	200	250	250	200	682	-	82	53
Saskatchewan Research Council (1)	3,016	2,661	2,685	2,728	3,218	3,555	3,908	5,857
Other	106	250	134	72	90	180	194	415
Total	5,730	8,498	11,706	8,606	9,619	11,805	16,056	23,357

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TABLE 26. Departmental Personnel Engaged in Scientific Activities in the Natural Sciences, by Activity and Category, 1977-78 to 1984-85

Activity and Category	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
(person-years)								
Research & development:								
Scientific & professional .	21	26	34	32	29	42	37	48
Technical	21	17	26	31	33	39	36	39
Other	7	7	7	10	7	8	4	6
Sub-total	49	50	67	73	69	89	77	93
Related scientific activities:								
Scientific & professional .	56	70	97	58	58	86	84	79
Technical	131	91	92	109	97	156	160	116
Other	31	33	46	60	47	43	42	45
Sub-total	218	194	235	227	202	285	286	240
Total natural science activities:								
Scientific & professional .	77	96	131	90	87	128	121	127
Technical	152	108	118	140	130	195	196	155
Other	38	40	53	70	54	51	46	51
Total	267	244	302	300	271	374	363	333

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TABLE 27. Total Expenditures in the Natural Sciences, by Sources of Funds, 1983-84

Department or Agency	Departmental budget	From other departments	Transfers from federal government	From other sources	Total
	(\$'000)				
Agriculture	7,219	-	11	406	7,636
Cancer Foundation	282	-	-	-	282
Culture & Recreation	159	-	7	-	166
Energy & Mines	2,383	-	2,259	2,184	6,826
Environment	687	-	-	-	687
Health	5,233	-	178	968	6,379
Highways & Transportation	1,415	-	-	-	1,415
Parks & Renewable Resources	1,880	100	-	-	1,980
Rural Development	205	-	-	-	205
Science & Technology	190	-	-	450	640
Supply & Services	440	-	-	-	440
Tourism & Small Business	10	-	-	-	10
Total	23,979(1)	100	2,455	4,008	30,542(1)

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TABLE 28. Total Expenditures in the Natural Sciences, by Activity and Performer, 1983-84

Activity	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
(\$'000)							
Research and development:							
Current expenditures:							
In-house	2,748	...	...	...	...	...	2,748
Contracts	247	3,211	47	-	17	18	3,540
Grants	248	38	5,222	71	3,891(1)	176	9,646
Research fellowships	-	-	111	11	-	-	122
Sub-total	3,243	3,249	5,380	82	3,908	194	16,056
Capital expenditures	82	...	...	...	...	...	82
Related scientific activities:							
Current expenditures:							
Education support	-	-	95	6	-	-	101
Technical surveys	5,067	120	118	-	28	33	5,366
Information services	2,425	130	59	-	-	40	2,654
Special services & studies	4,609	772	102	-	289	334	6,106
Museum services	113	-	-	-	-	-	113
Sub-total	12,214	1,022	374	6	317	407	14,340
Capital expenditures	64	...	...	...	...	...	64
Total	15,603	4,271	5,754	88	4,225	601	30,542

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TABLE 29. Total Expenditures in the Natural Sciences, by Department or Agency and Performer, 1983-84

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
	(\$'000)						
Agriculture	3,366	56	4,020	-	21	173	7,636
Cancer Foundation	279	-	3	-	-	-	282
Culture & Recreation	157	-	9	-	-	-	166
Energy & Mines	2,554	3,532	120	-	289	331	6,826
Environment	404	134	96	-	20	33	687
Health	5,275	-	976	88	-	40	6,379
Highways & Transportation	1,271	67	59	-	1	17	1,415
Parks & Renewable Resources	1,843	110	15	-	8	4	1,980
Rural Development	52	153	-	-	-	-	205
Science & Technology	102	79	456	-	-	3	640
Supply & Services	300	140	-	-	-	-	440
Tourism & Small Business	-	-	-	-	10	-	10
Total	15,603	4,271	5,754	88	4,225(1)	601	30,542(1)

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TABLE 30. Current Expenditures in the Natural Sciences, by Department or Agency and Activity, 1983-84

Department or Agency	Research & development	Education support	Technical surveys	Information services	Special services & studies	Museum services	Total
	(\$'000)						
Agriculture	4,554	-	1,609	1,411	62	-	7,636
Cancer Foundation	259	-	-	-	-	-	259
Culture & Recreation	10	-	5	20	-	-	148
Energy & Mines	3,320	-	1,405	822	1,279	113	6,826
Environment	50	-	485	11	141	-	687
Health	2,269	83	-	90	3,893	-	6,335
Highways & Transportation	257	18	757	4	379	-	1,415
Parks & Renewable Resources ...	931	-	995	5	34	-	1,965
Rural Development	-	-	-	-	199	-	199
Science & Technology	450	-	-	-	9	-	640
Supply & Services	70	-	110	110	110	-	400
Tourism & Small Business	10	-	-	-	-	-	10
Total	16,056(1)	101	5,366	2,654	6,106	113	30,396(1)

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TABLE 31. Current Expenditures on R&D in the Natural Sciences, by Department or Agency and Performer, 1983-84

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
	(\$'000)						
Agriculture	284	56	4,020	-	21	173	4,554
Cancer Foundation	256	-	3	-	-	-	259
Culture & Recreation	10	-	-	-	-	-	10
Energy & Mines	217	3,103	-	-	-	-	3,320
Environment	-	-	50	-	-	-	50
Health	1,384	-	803	82	-	-	2,269
Highways & Transportation	200	-	39	-	1	17	257
Parks & Renewable Resources	842	70	15	-	-	4	931
Science & Technology	-	-	450	-	-	-	450
Supply & Services	50	20	-	-	-	-	70
Tourism & Small Business	-	-	-	-	10	-	10
Total	3,243	3,249	5,380	82	3,908(1)	194	16,056(1)

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TABLE 32. Detail of Intramural Expenditures in the Natural Sciences, by Department or Agency and Expenditure, 1983-84

Department or Agency	Current expenditures		Capital expenditures	Total
	Personnel costs	Other costs		
	(\$'000)			
Agriculture	2,412	954	-	3,366
Cancer Foundation	227	29	23	279
Culture & Recreation	119	20	18	157
Energy & Mines	1,867	687	-	2,554
Environment	257	147	-	404
Health	3,477	1,754	44	5,275
Highways & Transportation	890	381	-	1,271
Parks & Renewable Resources	1,240	588	15	1,843
Rural Development	35	11	6	52
Science & Technology	50	52	-	102
Supply & Services	220	40	40	300
Total	10,794	4,663	146	15,603

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TABLE 33. Departmental Personnel Engaged in Scientific Activities in the Natural Sciences, by Department or Agency, 1983-84

Department or Agency	Research & development			Related scientific activities		
	Scientific & professional	Technical	Other	Scientific & professional	Technical	Other
	(person-years)					
Agriculture	8	-	-	23	42	3
Cancer Foundation	-	8	-	-	-	-
Culture & Recreation	-	-	-	3	2	-
Energy & Mines	2	-	1	26	15	11
Environment	-	-	-	3	5	1
Health	12	18	2	12	59	24
Highways & Transportation ...	2	3	1	3	25	1
Parks & Renewable Resources .	12	7	-	10	8	1
Rural Development	-	-	-	-	1	-
Science & Technology	-	-	-	1	-	1
Supply & Services	1	-	-	3	3	-
Total	37	36	4	84	160	42
						286

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TABLE 34. Objectives of Expenditures in the Natural Sciences, by Department or Agency, 1983-84

Department or Agency	Advancement of science	Energy & fuels		Environmental issues	Health
		Fossil fuels	Other		
(\$'000)					
Agriculture	-	-	-	-	-
Cancer Foundation	-	-	-	-	282
Culture & Recreation	10	-	-	-	-
Energy & Mines	-	3,672	927	-	-
Environment	-	-	-	666	-
Health	-	-	-	-	6,379
Highways & Transportation ..	-	-	-	-	-
Parks & Renewable Resources	-	-	-	-	-
Rural Development	-	-	-	-	-
Science & Technology	102	-	450	-	-
Supply & Services	-	-	-	10	-
Tourism & Small Business ..	-	-	-	-	-
Total	360(1)	3,672	1,621(1)	1,412(1)	6,661

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TABLE 34. Objectives of Expenditures in the Natural Sciences, by Department or Agency, 1983-84 - Continued

Department or Agency	Industrial & economic development					
	Agriculture	Fisheries	Forestry	Manufacturing	Minerals	Other
	(\$'000)					
Agriculture	7,636	-	-	-	-	-
Cancer Foundation	-	-	-	-	-	-
Culture & Recreation	-	-	-	-	-	-
Energy & Mines	-	-	-	-	2,227	-
Environment	-	-	-	-	-	-
Health	-	-	-	-	-	-
Highways & Transportation ...	-	-	-	-	-	-
Parks & Renewable Resources .	-	830	426	-	-	637
Rural Development	-	-	-	-	-	-
Science & Technology	-	-	-	88	-	-
Supply & Services	15	-	-	-	15	350
Tourism & Technology	-	10	-	-	-	-
Total	8,155(1)	840	426	631(1)	2,990(1)	1,840(1)

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TABLE 34. Objectives of Expenditures in the Natural Sciences, by Department or Agency, 1983-84 - Concluded

Department or Agency	Social development & related areas				Total
	Culture, sport & recreation	Urban & regional studies	Other	Transportation	
(\$'000)					
Agriculture	-	-	-	-	7,636
Cancer Foundation	-	-	-	-	282
Culture & Recreation	-	-	156	-	166
Energy & Mines	-	-	-	-	6,826
Environment	-	21	-	-	687
Health	-	-	-	-	6,379
Highways & Transportation	-	-	-	-	1,415
Parks & Renewable Resources	87	-	-	-	1,980
Rural Development	-	-	-	205	205
Science & Technology	-	-	-	-	640
Supply & Services	-	40	-	10	440
Tourism & Small Business ..	-	-	-	-	10
Total	87	61	156	1,630	30,542(1)

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TABLE 35. Objectives of Expenditures in the Natural Sciences, by Activity, 1983-84

Objective	Intramural		Extramural		Total
	Research & development	Related scientific activities	Research & development	Related scientific activities	
(\$'000)					
Advancement of science	10	102	248	-	360
Energy & fuels:					
Fossil fuels	217	49	3,103	303	3,672
Other.....	-	144	694	783	1,621
Environmental issues	-	403	786	223	1,412
Health	1,707	3,847	888	219	6,661
Industrial & economic development:					
Agriculture	289	3,092	4,774	-	8,155
Fisheries	414	412	14	-	840
Forestry	365	56	5	-	426
Manufacturing	-	-	543	88	631
Minerals	5	2,154	748	83	2,990
Other	108	639	953	140	1,840
Social development & related areas:					
Culture, sport & recreation	-	79	-	8	87
Urban & regional studies	10	21	-	30	61
Transportation	200	1,133	57	240	1,630
Other	-	147	-	9	156
Total	3,325	12,278	12,813(1)	2,126	30,542(1)

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TABLE 36. Total Expenditures in the Natural Sciences, by Activity and Performer, 1984-85(e)

Activity	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
(\$'000)							
Research & development:							
Current expenditures:							
In-house	2,834	...	...	...	...	...	2,834
Contracts	384	4,331	411	-	583	86	5,795
Grants(1)	554	2,030	6,393	46	5,274	329	14,626
Research fellowships	19	-	76	7	-	-	102
Sub-total	3,791	6,361	6,880	53	5,857	415	23,357
Capital expenditures	136	...	...	...	...	...	136
Related scientific activities:							
Current expenditures:							
Education support	-	-	114	9	-	-	123
Technical surveys	3,362	115	115	-	52	148	3,792
Information services	2,697	463	28	-	25	84	3,297
Special services & studies	4,301	588	26	-	75	55	5,045
Museum services	117	-	-	-	-	-	117
Sub-total	10,477	1,166	283	9	152	287	12,374
Capital expenditures	217	...	...	...	...	...	217
Total(1)	14,621	7,527	7,163	62	6,009	702	36,084

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TABLE 37. Total Expenditures in the Natural Sciences, by Department or Agency and Performer, 1984-85(e)

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
	(\$'000)						
Agriculture	1,488	35	4,169	-	25	326	6,043
Cancer Foundation	425	-	-	-	-	-	425
Culture & Recreation	159	-	3	-	-	-	162
Energy & Mines	2,456	4,321	486	-	527	125	7,915
Environment	444	212	215	-	90	133	1,094
Health	5,292	-	734	62	40	-	6,128
Highways & Transportation	1,304	60	18	-	5	30	1,417
Parks & Renewable Resources ...	1,829	90	23	-	15	4	1,961
Rural Affairs	54	145	-	-	-	-	199
Science & Technology	890	2,524	1,515	-	975	84	5,988
Supply & Services	280	140	-	-	-	-	420
Tourism & Small Business	-	-	-	-	63	-	63
Total	14,621	7,527	7,163	62	6,009(1)	702	36,084(1)

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TABLE 38. Current Expenditures in the Natural Sciences, by Department or Agency and Activity, 1984-85(e)

Department or Agency	Research & development	Education support	Technical surveys	Information services	Special services & studies	Museum services	Total
	(\$'000)						
Agriculture	5,095	-	-	940	8	-	6,043
Cancer Foundation	395	-	-	-	-	-	395
Culture & Recreation	15	-	5	23	-	117	160
Energy & Mines	5,555	-	1,414	822	124	-	7,915
Environment	200	-	537	-	357	-	1,094
Health	2,026	105	-	-	3,746	-	5,877
Highways & Transportation ..	240	18	805	4	350	-	1,417
Parks & Renewable Resources	935	-	921	5	50	-	1,911
Rural Affairs	-	-	-	-	199	-	199
Supply & Services	70	-	110	110	110	-	400
Tourism & Small Business...	63	-	-	-	-	-	63
Science & Technology	4,494	-	-	1,393	101	-	5,988
Total	23,357(1)	123	3,792	3,297	5,045	117	35,731(1)

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TABLE 39. Current Expenditures on R&D in the Natural Sciences, by Department or Agency and Performer, 1984-85(e)

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
(\$'000)							
Agriculture	540	35	4,169	-	25	326	5,095
Cancer Foundation	395	-	-	-	-	-	395
Culture & Recreation	15	-	-	-	-	-	15
Energy & Mines	384	4,251	360	-	505	55	5,555
Environment	-	-	200	-	-	-	200
Health	1,295	-	638	53	40	-	2,026
Highways & Transportation	200	5	-	-	5	30	240
Parks & Renewable Resources ...	858	50	23	-	-	4	935
Supply & Services	50	20	-	-	-	-	70
Tourism & Small Business	-	-	-	-	63	-	63
Science & Technology	54	2,000	1,490	-	950	-	4,494
Total	3,791	6,361	6,880	53	5,857(1)	415	23,357(1)

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TABLE 40. Departmental Personnel Engaged in Scientific Activities in the Natural Sciences, by Department or Agency, 1984-85(e)

Department or Agency	Research & development			Related scientific activities			
	Scientific & professional	Technical	Other	Total	Scientific & professional	Technical	Other
(person-years)							
Agriculture	15	-	-	15	14	3	3
Cancer Foundation	-	10	-	10	-	-	-
Culture & Recreation	-	-	-	-	3	2	-
Energy & Mines	4	-	1	5	24	15	11
Environment	-	-	-	-	2	6	1
Health	12	20	3	35	12	53	22
Highways & Transportation ..	2	3	1	6	3	25	1
Parks & Renewable Resources	13	6	1	20	10	8	3
Rural Development	-	-	-	-	-	1	-
Supply & Services	1	-	-	1	3	3	-
Science & Technology	1	-	-	1	8	-	4
Total	48	39	6	93	79	116	45
							240

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TABLE 41. Total Expenditures in the Social Sciences and Humanities, by Activity, 1977-78 to 1984-85

Activity	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
(\$'000)								
Research & development:								
Current expenditures:								
In-house	577	844	1,013	938	682	128	440	713
Contracts	23	11	58	316	330	117	255	1,246
Grants	65	-	-	987	275	219	207	394
Research fellowships	15	15	20	17	20	21	-	67
Sub-total	680	870	1,091	2,258	1,307	485	902	2,420
Capital expenditures	-	-	1	8	-	-	-	550
Related scientific activities:								
Current expenditures	5,717	6,605	6,795	8,212	9,037	9,704	10,554	11,554
Capital expenditures	204	136	229	138	20	65	93	307
Total	6,601	7,611	8,116	10,616	10,364	10,254	11,549	14,831

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TABLE 42. Total Expenditures in the Social Sciences and Humanities, by Department or Agency 1977-78 to 1984-85

Department or Agency	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
	(\$'000)							
Advanced Education & Manpower	1,423	2,035	2,221	2,121	2,249	2,361	170	80
Agriculture	221	564	617	515	450	944	971	905
Archives Board	370	487	521	722	772	872	1,002	955
Co-operation & Co-op Dev't ..	149	323	443	529	168	...	219	235
Consumer & Commercial Affairs	81	10	6	2	...	75	75	100
Culture & Recreation	399	146	160	83	90	139	192	214
Economic Dev't & Trade	...	...	...	...	...	...	556	876
Education	137	101	61	177	149	197	158	180
Executive Council	192	202	213	121	129	201	131	146
Finance	30	41	42	...	...	...	...	...
Health	1,050	1,507	1,711	2,686	1,947	1,699	2,665	2,867
Highway Traffic Board	156	120	50	178	97	127	90	99
Indian & Native Affairs Sec..	...	...	...	...	...	...	188	188
Industry & Commerce	564	340	282	243	423	390	...	...
Justice	...	...	...	...	655	694	1,295	1,360
Labour	411	458	458	458	...	...	675	623
Municipal Affairs	260	260	...	...	...	...	...	...
Northern Saskatchewan	154	...	...	...	175	...	...	...
Parks & Renewable Resources .	...	...	...	...	...	...	256	620
Revenue & Financial Services.	...	...	...	...	...	...	110	160
Rural Development	...	...	...	146	130	...	...	...
Saskatchewan Crop Ins Corp ..	135	...	...	...	...	...	...	...
Saskatchewan Housing Corp ...	132	205	198	356	371	...	...	...
Science & Technology	...	...	...	...	...	...	...	...
Social Services	724	794	863	1,202	1,421	1,575	1,824	3,147
Supply & Services	...	...	...	...	...	...	420	1,449
Tourism & Renewable Resources	13	18	1	330	377	...	...	...
Tourism & Small Business	...	...	...	...	...	186	80	80
Urban Affairs	...	...	269	747	761	794	460	497
Total	6,601	7,611	8,116	10,616	10,364	10,254	11,549	14,831

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TABLE 43. Total Expenditures in the Social Sciences and Humanities, by Performer, 1977-78 to 1984-85

Performer	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
	(\$'000)							
Intramural	4,585	5,125	5,665	6,679	6,226	6,618	8,947	10,793
Industry	672	649	502	951	1,251	914	1,230	1,691
Universities	1,208	1,761	1,949	1,721	2,183	2,122	654	789
Hospitals & health organizations	7	-	-	950	177	119	115	166
Saskatchewan Research Council	-	70	-	19	160	35	2	101
Other	129	6	-	296	367	446	601	1,291
Total	6,601	7,611	8,116	10,616	10,364	10,254	11,549	14,831

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TABLE 44. Current Expenditures on R&D in the Social Sciences and Humanities, by Department or Agency, 1977-78 to 1984-85

Department or Agency	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
	(\$'000)							
Advanced Education & Manpower	42	37	28	32	20	21	...	...
Agriculture	25	41	24	78	36	43	100	100
Archives Board	32	101	107	32	...	...	...	...
Co-operation & Co-op Dev't	...	...	60	104	...	...	...	...
Consumer & Commercial Affairs	...	...	...	...	...	12	12	...
Culture & Recreation	77	86	90	83	90	13	8	20
Education	40	...	...	...	...	...	...	...
Executive Council	55	64	67	61	65	134	65	73
Health	355	485	674	1,515	752	170	274	437
Highway Traffic Board	35	34	15	50	...	...	...	...
Parks & Renewable Resources	...	...	...	...	...	...	90	70
Sask Housing Corporation	...	...	...	...	44	...	...	...
Social Services	12	12	26	33	...	92	133	1,141
Supply & Services	...	...	...	...	...	...	220	579
Tourism & Renewable Resources	7	10	...	270	300	...	...	...
Total	680	870	1,091	2,258	1,307	485	902	2,420

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TABLE 45. Current Expenditures on R&D in the Social Sciences and Humanities, by Performer, 1977-78 to 1984-85

Performer	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
	(\$'000)							
Intramural	605	855	1,071	971	682	128	440	743
Industry	-	-	-	255	300	-	130	136
Universities	15	15	20	17	181	159	190	358
Hospitals & health organizations	7	-	-	950	114	119	107	163
Saskatchewan Research Council	-	-	-	-	-	-	-	20
Other	53	-	-	65	30	79	35	1,000
Total	680	870	1,091	2,258	1,307	485	902	2,420

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TABLE 46. Departmental Personnel Engaged in Scientific Activities in the Social Sciences and Humanities, by Activity and by Category, 1977-78 to 1984-85

Activity and Category	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(e)
(person-years)								
Research & development:								
Scientific & professional ...	24	23	29	25	15	7	10	18
Technical	4	12	15	10	9	1	1	1
Other	1	2	5	5	4	-	-	2
Sub-total	29	37	49	40	28	8	11	21
Related scientific activities:								
Scientific & professional ...	95	92	86	93	99	106	129	141
Technical	15	19	19	15	11	14	23	21
Other	46	43	47	45	44	46	69	65
Sub-total	156	154	152	153	154	166	221	227
Total social science activities:								
Scientific & professional....	119	115	115	118	114	113	139	159
Technical	19	31	34	25	20	15	24	22
Other	47	45	52	50	48	46	69	67
Total	185	191	201	193	182	174	232	248

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TABLE 47. Total Expenditures in the Social Sciences and Humanities, by Sources of Funds, 1983-84

Department or Agency	Departmental budget	Transfers from other departments	Transfers from federal government	From trust funds	From other sources	Total
(\$'000)						
Advanced Education & Manpower ..	170	-	-	-	-	170
Agriculture	934	-	-	-	37	971
Archives Board	943	31	-	3	25	1,002
Co-operation & Co-op Dev't	219	-	-	-	-	219
Consumer & Commercial Affairs ..	75	-	-	-	-	75
Culture & Recreation	190	-	2	-	-	192
Economic Dev't & Trade	556	-	-	-	-	556
Education	138	-	20	-	-	158
Executive Council	128	-	3	-	-	131
Health	2,398	-	55	182	30	2,665
Highway Traffic Board	90	-	-	-	-	90
Indian & Native Affairs Secr't ..	188	-	-	-	-	188
Justice	1,295	-	-	-	-	1,295
Labour	675	-	-	-	-	675
Parks & Renewable Resources	256	-	-	-	-	256
Revenue & Financial Services ...	110	-	-	-	-	110
Science & Technology	12	-	-	-	-	12
Social Services	1,799	25	-	-	-	1,824
Supply & Services	220	200	-	-	-	420
Tourism & Small Business	80	-	-	-	-	80
Urban Affairs	460	-	-	-	-	460
Total	10,936	256	80	185	92	11,549

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TABLE 48. Total Expenditures in the Social Sciences and Humanities, by Activity and Performer, 1983-84

Activity	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
(\$'000)							
Research and development:							
Current expenditures:							
In-house	440	...	...	...	...	...	440
Contracts	-	130	90	-	-	35	255
Grants	-	-	100	107	-	-	207
Research fellowships	-	-	-	-	-	-	-
Sub-total	440	130	190	107	-	35	902
Capital expenditures	-	...	...	...	...	...	-
Related scientific activities:							
Current expenditures	8,414	1,100	464	8	2	566	10,554
Capital expenditures	93	...	...	...	...	...	93
Total	8,947	1,230	654	115	2	601	11,549

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TABLE 49. Total Expenditures in the Social Sciences and Humanities, by Department or Agency and Performer, 1983-84

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
	(\$'000)						
Advanced Education & Manpower ..	170	-	-	-	-	-	170
Agriculture	558	169	152	-	-	92	971
Archives Board	1,002	-	-	-	-	-	1,002
Co-operation & Co-op Dev't	85	-	130	-	-	4	219
Consumer & Commercial Affairs ..	50	-	25	-	-	5	75
Culture & Recreation	185	-	-	-	2	-	192
Economic Dev't & Trade	84	472	-	-	-	-	556
Education	54	35	69	-	-	-	158
Executive Council	131	-	228	17	-	-	131
Health	2,420	-	-	-	-	-	2,665
Highway Traffic Board	90	-	-	-	-	100	90
Indian & Native Affairs Secr't..	20	68	-	-	-	-	188
Justice	1,295	-	25	-	-	-	1,295
Labour	650	-	-	-	-	16	675
Parks & Renewable Resources	150	90	-	-	-	-	256
Revenue & Financial Services ..	46	64	-	-	-	-	110
Science & Technology	12	-	-	-	-	-	12
Social Services	1,341	57	-	98	-	328	1,824
Supply & Services	380	40	-	-	-	-	420
Tourism & Small Business	-	80	-	-	-	-	80
Urban Affairs	224	155	25	-	-	56	460
Total	8,947	1,230	654	115	2	601	11,549

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TABLE 50. Current Expenditures in the Social Science and Humanities, by Department or Agency and Activity, 1983-84

Department or Agency	Research & development	Related scientific activities	Total
(\$'000)			
Advanced Education	-	170	170
Agriculture	100	871	971
Archives Board	-	916	916
Co-operation & Co-op Dev't	12	219	219
Consumer & Commercial Affairs	8	63	75
Culture & Recreation	-	177	185
Economic Dev't & Trade	-	556	556
Education	-	158	158
Executive Council	65	66	131
Health	274	2,391	2,665
Highway Traffic Board	-	90	90
Indian & Native Affairs Secr't	-	188	188
Justice	-	1,295	1,295
Labour	-	675	675
Parks & Renewable Resources	90	166	256
Revenue & Financial Services	-	110	110
Science & Technology	-	12	12
Social Services	133	1,691	1,824
Supply & Services	220	200	420
Tourism & Small Business	-	80	80
Urban Affairs	-	460	460
Total	902	10,554	11,456

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TABLE 51. Current Expenditures on R&D in the Social Sciences and Humanities, by Department or Agency and Performer, 1983-84

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
	(\$'000)						
Agriculture	10	-	90	-	-	-	100
Consumer & Commercial Affairs ..	-	-	12	-	-	-	12
Culture & Recreation	8	-	-	-	-	-	8
Executive Council	65	-	-	9	-	-	65
Health	177	-	88	-	-	-	274
Parks & Renewable Resources	-	90	-	-	-	35	90
Social Services	-	-	-	98	-	-	133
Supply & Services	180	40	-	-	-	-	220
Total	440	130	190	107	-	35	902

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TABLE 52. Detail of Intramural Expenditures in the Social Sciences and Humanities, by Department or Agency and Expenditure, 1983-84

Department or Agency	Current expenditures		Capital	Total
	Personnel costs	Other costs		
	(\$'000)			
Advanced Education & Manpower ..	122	48	-	170
Agriculture	458	100	-	558
Archives Board	726	190	86	1,002
Co-operation & Co-op Dev't	80	5	-	85
Consumer & Commercial Affairs ..	40	10	-	50
Culture & Recreation	145	33	7	185
Economic Dev't & Trade	84	-	-	84
Education	44	10	-	54
Executive Council	95	36	-	131
Health	2,104	316	-	2,420
Highway Traffic Board	89	1	-	90
Indian & Native Affairs Sec'r't ..	20	-	-	20
Justice	1,145	150	-	1,295
Labour	462	188	-	650
Parks & Renewable Resources	100	50	-	150
Revenue & Financial Services ...	46	-	-	46
Science & Technology	8	4	-	12
Social Services	1,060	281	-	1,341
Supply & Services	380	-	-	380
Urban Affairs	224	-	-	224
Total	7,432	1,422	93	8,947

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TABLE 53. Departmental Personnel Engaged in Scientific Activities in the Social Sciences and Humanities, by Department or Agency, 1983-84

Department or Agency	Research & development			Related scientific activities			
	Scientific & professional	Technical	Other	Scientific & professional	Technical	Other	Total
	(person-years)						
Advanced Education & Manpower .	-	-	-	3	1	1	5
Agriculture	-	-	-	8	1	6	15
Archives Board	-	-	-	12	4	12	28
Co-operation & Co-op Dev't	-	-	-	2	-	-	2
Consumer & Commercial Affairs .	-	-	-	1	-	-	1
Culture & Recreation	-	-	-	3	2	2	7
Economic Dev't & Trade	-	-	-	3	-	-	3
Education	-	-	-	1	-	-	1
Executive Council	2	1	3	1	2	-	3
Health	4	-	-	28	8	24	60
Highway Traffic Board	-	-	-	2	-	1	3
Indian & Native Affairs Secr't.	-	-	-	1	-	-	1
Justice	-	-	-	18	-	10	28
Labour	-	-	-	9	-	5	14
Parks & Renewable Resources ...	-	-	-	2	2	1	5
Revenue & Financial Services...	-	-	-	2	-	-	2
Social Services	-	-	-	21	3	7	31
Supply & Services	4	-	-	6	-	-	6
Urban Affairs	-	-	-	6	-	-	6
Total	10	1	11	129	23	69	221

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TABLE 54. Objectives of Expenditures in the Social Sciences and Humanities, by Department or Agency, 1983-84

Department or Agency	Advancement of science	Environmental issues	Health	Industrial & economic development			
				Agriculture	Forestry	Manufacturing	Other
(\$'000)							
Advanced Education & Manpower ..	110	-	-	-	-	-	-
Agriculture	-	-	-	971	-	-	-
Archives Board	-	-	-	-	-	-	-
Co-operation & Co-op Dev't	-	-	-	35	-	-	50
Consumer & Commercial Affairs ..	-	-	25	-	-	-	-
Culture & Recreation	-	-	-	-	-	-	-
Economic Dev't & Trade	-	-	-	-	-	556	-
Education	-	-	-	-	-	-	-
Executive Council	131	-	-	-	-	-	-
Health	-	-	2,665	-	-	-	-
Highway Traffic Board	-	-	-	-	-	-	-
Indian & Native Affairs Secr't ..	-	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-
Labour	-	-	-	-	-	-	-
Parks & Renewable Resources	-	14	-	-	5	-	-
Revenue & Financial Services ...	-	-	-	-	-	-	-
Science & Technology	12	-	-	-	-	-	-
Social Services	-	-	251	-	-	-	-
Supply & Services	-	-	-	-	-	-	-
Tourism & Small Business	-	-	-	-	-	-	-
Urban Affairs	-	88	10	-	-	-	-
Total	253	102	2,951	1,006	5	556	50

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TABLE 54. Objectives of Expenditures in the Social Sciences and Humanities, by Department or Agency, 1983-84 - Concluded

Department or Agency	Social development & related areas					Transportation	Other	Total
	Culture, sport & recreation	Education	Human resources	Urban & regional studies	Other			
	(\$'000)							
Advanced Education & Manpower ..	-	60	-	-	-	-	-	170
Agriculture	-	-	-	-	-	-	-	971
Archives Board	-	-	-	-	1,002	-	-	1,002
Co-operation & Co-op Dev't	-	134	-	-	50	-	-	219
Consumer & Commercial Affairs ..	-	-	-	-	192	-	-	75
Culture & Recreation	-	-	-	-	-	-	-	192
Economic Dev't & Trade	-	-	-	-	-	-	-	556
Education	-	158	-	-	-	-	-	158
Executive Council	-	-	-	-	-	-	-	131
Health	-	-	-	-	-	-	-	2,665
Highway Traffic Board	-	-	-	-	-	90	-	90
Indian & Native Affairs Secr't ..	-	-	-	-	188	-	-	188
Justice	-	-	-	-	1,295	-	-	1,295
Labour	-	-	675	-	-	-	-	675
Parks & Renewable Resources	237	-	-	-	-	-	-	256
Revenue & Financial Services ...	-	-	91	-	19	-	-	110
Science & Technology	-	-	-	-	-	-	-	12
Social Services	-	-	-	-	1,573	-	-	1,824
Supply & Services	-	-	-	-	-	-	420	420
Tourism & Small Business	80	-	-	-	-	-	-	80
Urban Affairs	100	50	-	212	-	-	-	460
Total	417	402	766	212	4,319	90	420	11,549

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TABLE 55. Objectives of Expenditures in the Social Sciences and Humanities, by Activity, 1983-84

Objective	Intramural		Extramural		Total
	Research & development	Related scientific activities	Research & development	Related scientific activities	
	(\$'000)				
Advancement of science	65	188	-	-	253
Environmental issues	14	43	-	45	102
Health	177	2,247	242	285	2,951
Industrial & economic development:					
Agriculture	10	583	220	193	1,006
Forestry	5	-	-	-	5
Manufacturing	-	84	-	472	556
Other	-	50	-	-	50
Social development & related areas:					
Culture, sport & recreation	71	199	-	147	417
Education	-	139	-	263	402
Human resources	-	677	-	89	766
Urban & regional studies	-	103	-	109	212
Other	8	3,904	-	407	4,319
Transportation	-	90	-	-	90
Other	180	200	40	-	420
Total	530	8,507	502	2,010	11,549

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TABLE 56. Total Expenditures in the Social Sciences and Humanities, by Activity and Performer, 1984-85(e)

Activity	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
(\$'000)							
Research and development:							
Current expenditures:							
In-house	713	...	...	...	...	...	713
Contracts	-	136	90	-	20	1,000	1,246
Grants	3	-	230	161	-	-	394
Research fellowships	27	-	38	2	-	-	67
Sub-total	743	136	358	163	20	1,000	2,420
Capital expenditures	550	...	...	...	...	...	550
Related scientific activities:							
Current expenditures	9,193	1,555	431	3	81	291	11,554
Capital expenditures	307	...	...	...	...	...	307
Total	10,793	1,691	789	166	101	1,291	14,831

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TABLE 57. Total Expenditures in the Social Sciences and Humanities, by Department or Agency and Performer, 1984-85(e)

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
	(\$'000)						
Advanced Education & Manpower ..	80	-	-	-	-	-	80
Agriculture	560	190	155	-	-	-	905
Archives Board	955	-	-	-	-	-	955
Co-operation & Co-op Dev't	90	-	140	-	-	5	235
Consumer & Commercial Affairs ..	100	-	-	-	-	-	100
Culture & Recreation	212	-	-	-	1	1	214
Economic Dev't & Trade	102	774	-	-	-	-	876
Education	60	40	80	-	-	-	180
Executive Council	146	-	-	-	-	-	146
Health	2,454	-	388	25	-	-	2,867
Highway Traffic Board	99	-	-	-	-	-	99
Indian & Native Affairs Secr't ..	20	68	-	-	-	100	188
Justice	1,360	-	-	-	-	-	1,360
Labour	623	-	-	-	-	-	623
Parks & Renewable Resources	500	120	-	-	-	-	620
Revenue & Financial Services	80	80	-	-	-	-	160
Science & Technology	50	-	-	-	-	-	50
Social Services	1,704	100	-	141	80	1,122	3,147
Supply & Services	1,363	66	-	-	20	-	1,449
Tourism & Small Business	-	80	-	-	-	-	80
Urban Affairs	235	173	26	-	-	63	497
Total	10,793	1,691	789	166	101	1,291	14,831

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TABLE 59. Current Expenditures on R&D in the Social Sciences and Humanities, by Department or Agency and Performer, 1984-85(e)

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council	Other	Total
	(\$'000)						
Agriculture	10	-	90	-	-	-	100
Culture & Recreation	20	-	-	-	-	-	20
Executive Council	73	-	-	-	-	-	73
Health	147	-	268	22	-	-	437
Parks & Renewable Resources	-	70	-	-	-	-	70
Social Services	-	-	-	141	-	1,000	1,141
Supply & Services	493	66	-	-	20	-	579
Total	743	136	358	163	20	1,000	2,420

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TABLE 60. Departmental Personnel Engaged in Scientific Activities in the Social Sciences and Humanities, by Department or Agency, 1984-85(e)

Department or Agency	Research & development			Related scientific activities			
	Scientific & professional	Technical	Other	Total	Scientific & professional	Technical	Other
(person-years)							
Advanced Education & Manpower ..	-	-	-	-	1	-	1
Agriculture	-	-	-	-	8	1	6
Archives Board	-	-	-	-	12	4	10
Co-operation & Co-op Dev't	-	-	-	-	2	-	-
Consumer & Commercial Affairs ..	-	-	-	-	1	-	-
Culture & Recreation	-	-	-	-	3	2	1
Economic Dev't & Trade	-	-	-	-	4	-	-
Education	-	-	-	-	1	-	-
Executive Council	2	1	-	3	1	2	-
Health	3	-	-	3	23	7	25
Highway Traffic Board	-	-	-	-	2	-	1
Indian & Native Affairs Secr't.	-	-	-	-	1	-	-
Justice	-	-	-	-	18	-	10
Labour	-	-	-	-	8	-	5
Parks & Renewable Resources ...	-	-	-	-	2	2	2
Revenue & Financial Services...	-	-	-	-	3	-	-
Science & Technology	-	-	-	-	1	-	-
Social Services	-	-	-	-	38	3	4
Supply & Services	13	-	2	15	6	-	-
Urban Affairs	-	-	-	-	6	-	-
Total	18	1	2	21	141	21	65
							227

APPENDIX

DEFINITIONS

This report covers those scientific and technological activities which involve the generation, dissemination and application of new scientific and technological knowledge. The central activity is research and experimental development (R&D). In addition, there are a number of related scientific activities (RSA) which are considered in less detail.

R&D is creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society and the use of this stock of knowledge to devise new applications.

It requires the acquisition of knowledge and not just information. New knowledge involves the integration of newly acquired information into existing hypotheses, the formulation and testing of new hypotheses or the re-evaluation of existing observations.

The major related scientific activities are technical surveys, statistical surveys, information services, special services and studies, and museum services. Statistical surveys, information services and museum services are largely self-explanatory.

Technical surveys are activities directed towards the exploration and systematic description of the earth and its natural resources. The activities include the gathering, processing, collating and analyzing of data on natural phenomena except when part of a research project of a museum service. The preparation of maps and survey reports, their printing and cataloguing, are also included.

Special services and studies in the natural sciences are activities directed towards the establishment of national and provincial standards for materials, devices, products and processes; the calibration of secondary standards; non-routine quality testing; feasibility studies and demonstration projects. In the social sciences, special services and studies are systematic investigations carried out in order to provide information needed for planning or policy formulation, including feasibility studies and demonstration projects.

DEFINITIONS - Concluded

Activities are either natural sciences or social sciences and humanities. Natural sciences consist of disciplines concerned with the understanding, exploring, developing or utilizing the natural world. Included are the engineering, mathematical, environmental, life and physical sciences. Social sciences and humanities include all disciplines involving the study of human actions and conditions and the social, economic and institutional mechanisms affecting humans. Included are such disciplines as anthropology, business administration and commerce, communications, criminology, demography, economics, geography, history, languages, literature and linguistics, law, library science, philosophy, political science, psychology, religious studies, social work, sociology and urban and regional studies.

Five performing sectors are identified besides the Saskatchewan Research Council. Intramural refers to the provincial department or agency performing a scientific activity. Industry is largely private corporations but also includes crown corporations with a commercial function (e.g., power utilities) and industrial research institutes not controlled by another institution. Universities cover post secondary educational institutions and affiliated teaching and research facilities. Hospitals and health organizations are health organizations such as the Heart Foundation and hospitals which do not belong to the universities sector. Other includes non-resident performers of scientific activities funded by the provincial government, as well as recipients not covered elsewhere such as the Federal Government, other provincial departments and individuals.

Expenditures are either current or capital. Current expenditures include those costs for personnel, transportation and communications, information, professional and special services, rentals, purchased repair and upkeep, utilities, materials and supplies. Capital expenditures are those on the construction and acquisition of land, buildings, machinery and equipment. Total expenditures include current plus capital.

THE RESPONDENTS

NOTE: The 1982 Saskatchewan provincial election resulted in a number of changes in departments. Where only the name of department was changed the new name is shown on historical tables. Departments which fall into this category are:

FORMERLY

Continuing Education
Consumer Affairs
Culture and Youth
Mineral Resources
Rural Affairs

CURRENTLY

Advanced Education and Manpower
Consumer and Commercial Affairs
Culture and Recreation
Energy and Mines
Rural Development

Other departments were reorganized in 1982. Mandates changed or were combined and/or shifted to newly created departments. These departments are shown historically under both the old and new names:

FORMERLY

Industry and Commerce

Economic Development and Trade

Tourism and Renewable Resources

Tourism and Small Business

Municipal Affairs

Parks and Renewable Resources

Rural Development (Affairs)

Urban Affairs

On historical tables the Executive council includes the Bureau of Statistics and Intergovernmental Affairs. The Alcoholism Commission, the Medical Care Insurance Commission and the Health Research Board are included with Health in historical tables.

RESPONDENTS - Continued

Advanced Education and Manpower:

The Planning and Evaluation Division Ministerial Task Force - Bill Wheatley 565-5608
reports on the labour force requirements and associated training strategies for the high technology and post-secondary education in Saskatchewan. An annual survey of Technical-Vocational Graduates is undertaken by the Labour Market Planning and Information Branch. Figures include the Office of Science and Technology data from April through December when it was included in this department's mandate. Significant decreases in 1983-84 and 1984-85 science expenditures reflect a reporting revision which excludes scholarships to university undergraduates. In subsequent report historical revisions for 1978-79 to 1982-83 will be made to reflect this reporting change.

Agriculture: Co-ordinator - Brenda Machin 565-5139
Seven different branches are included in this department's submission: Plant Industry, Family Farm Improvement, Conservation and Development, Animal Industry, Regional Extension, Irrigation Extension and Statistics and Public Information. In addition to performing both R&D and RSA intramurally, the department grants over \$3.7 million for R&D to the University of Saskatchewan in support of the University Farmlab Work Program.

Archives Board: Co-ordinator - Ian Wilson 565-4066
The Archives Board reports the total budget supporting RSA in the social sciences.

Cancer Foundation: Co-ordinator - R.J. Meldrum 585-1831

R&D is performed by the Foundation itself. Activities are related to the development of improvements in cancer treatment.

Consumer and Commercial Affairs:

The Planning and Policy Branch Co-ordinator - David Stuewe 565-3895
impact of rent control policies, research on the regulatory framework and its interrelation with business, and research on the food industry.

Co-operation & Co-operative Development: Co-ordinator - Don Trew 565-5378

The Administrative Services Branch collects information to write Acts and Programs and distributes information to the public. Provides financial support to the University of Saskatchewan Co-operative studies program and the Co-operative College of Canada. Conducts seminars on sharing, co-operating, co-operatives, group behaviour and leadership.

Culture and Recreation: Co-ordinator - Dr. Ian Dyck 565-2812
The Life and Earth Science sectors of the Museum of Natural History represent the natural science expenditures of this department. In the social sciences, our report includes expenditures of the Archaeology sections of the Museum and the Heritage Conservation Division. Collections acquisition, preparation, documentation, maintenance, exhibit planning, analysis and publication are some of the activities the department is involved in.

RESPONDENTS - Continued

Economic Development & Trade: Co-ordinator - David McQuinn 565-2210

Included in the Policy and Planning Branch's related scientific activities are: assessments and recommendations on applications to the Foreign Investment Review Agency and the Environmental Impact Assessment Panel, analysis of the economic impact of major industrial project proposals, management of extramural studies, development and maintenance of information systems, and development of publications identifying industrial opportunities.

Education: Co-ordinator - Bob Arkell 565-6057

Five divisions within the department are engaged in RSA: Policy, Planning and Special Projects Division, Regional Services Division, Development Division, Official Minority Language Office and the Administrative Services Division. They support research activities by providing consultative assistance and policy monitoring, public opinion surveys, the construction of standardized testing instruments, the design of research studies and distribution of research reports. Substantial efforts were directed towards assisting the activities of the Ministers Advisory Committee on Curriculum and Instruction.

Energy and Mines: Co-ordinator - Jim Hutchinson 565-3375

This department is the largest performer of scientific activities in the Government of Saskatchewan. Funding for scientific activities is split almost equally between the Federal Department of Energy, Mines and Resources, the Saskatchewan Heritage Fund and the department. The Heavy Oil Agreement, the Renewables Agreement and the Heavy Oil/Fossil Fuels Program are the activities which the Federal Government supports. Saskatchewan Oil and Gas Corporation is the major performer of extramural R&D.

Environment: Co-ordinator - Betty McGregor 565-6139

Branches involved in scientific activities within this department are: Environmental Assessment, Air Pollution Control, Land Protection, Water Pollution Control, Environmental Co-ordination and Hydrology. Activities include the chemistry of summer precipitation in northern Saskatchewan, lake sensitivity to acidic deposition, literature searches, hydrology studies, hydraulic studies, water quality surveys, preparation of environmental guidelines and a regional flood frequency study.

Executive Council: Saskatchewan Bureau of Statistics - Co-ordinator: I. Cascadden 565-6327

The bureau reports expenditures on both R&D and RSA in the social sciences. Projects include on-going research and improved development of the Economic Accounts, improving the methodology and publication of population projections, developing Retail Trade statistics for small areas of the province, and the collection and dissemination of statistical data.

Health: Co-ordinator - Wayne Fritz 565-3153

Included in this report are: Saskatchewan Prescription Drug Plan, Ambulance Services Unit, Psychiatric Services Branch, Policy Research and Management Services Branch, Vital Statistics Division, Provincial Laboratory, Community Health Services Branch, Medical Care Insurance Commission, Alcoholism Commission and the Health Research Board. Seventy-one percent of the expenditures are in the natural science and 71% percent of total science expenditure is for related scientific activities. Intramural activities account for 85% of the total expenditure.

RESPONDENTS - Continued

Highways and Transportation: Co-ordinator - J.L.M. Scott 565-4920

The Research Branch, Materials Testing Branch, Traffic Safety Branch and Planning Branch support natural science activities such as lab and field testing of materials and soils, geotechnical studies, pavement and bridge performance, road illumination, test track studies of pavement model concepts, traffic accident analyses etc.

Highway Traffic Board: Co-ordinator - R. Paragg 565-4054

The Legislative Review and Rate Unit, the Co-ordination and Research Unit, the Operations Review Unit, the Highway Traffic Board Services Branch and the Compliance Branch are units performing RSA in the social sciences.

Indian & Native Affairs Secretariat: Co-ordinator - Patrice Meloshe 565-5434

The secretariat funds related scientific activities in the social sciences. Activities include data collection and analysis on demographic, education, skills, health, employment, use of social services, housing, delinquency, crime etc.

Justice: Co-ordinator - Dr. John Hylton 565-3765

Senior Administration and the Policy, Planning and Evaluation Branch are extensively involved in program planning, policy development and program evaluation of related scientific activities in the social sciences. The Department makes a substantial contribution to the development and maintenance of specialized libraries for use by professional departmental staff.

Labour: Co-ordinator - Ruth Drope 565-2430

The Policy Planning & Research Division report RSA in the social sciences. These activities include analysis and monitoring of provincial collective bargaining agreements, conducts annual surveys of wages, salaries, fringe benefits and working conditions; maintenance of Labour Library publications of the department.

Parks and Renewable Resources: Co-ordinator - Garth White 565-4549

Park Visitor Services Branch, Parks and Lands Branch and the Statistics and Evaluation section report RSA and R&D in the social sciences. Four branches, Fisheries, Forestry, Wildlife and Construction report in the natural sciences. Eighty-nine percent of the activities are performed by departmental personnel.

Revenue & Financial Services: Co-ordinator - Barry Halbwachs 565-6530

The Policy and Research Branch research, analyze and report on the political, financial and administrative implications of changes to the various taxes and programs administered by the department. The Public Employees Benefit Agency researches, analyzes and reports on the implications of changes to the various pension and benefits plans administered by the department.

Rural Development: Co-ordinator - W. Antonio 565-2720

The Planning and Research Branch conducts traffic volume studies to classify municipal roads into various road programs that are eligible for provincial contribution and maintenance grants. Most of the work is performed extramurally by a consulting firm.

THE RESPONDENTS - CONCLUDED

Saskatchewan Research Council:

Money given to the Research Council, through Vote 35 is included in this report by Statistics Canada. Using a submission from the Council for another survey, we estimate where money is being spent and on what activities. Data for the council is included in the total of footnoted tables in the report. The Council is not shown as a department or agency because we are only including provincial government money, not the total expenditures of the Council.

Council funds from Vote 35 for the years included in this report in thousands of dollars are:

\$2,575 (1977-78)	\$3,065 (1981-82)
\$2,518 (1978-79)	\$3,519 (1982-83)
\$2,599 (1979-80)	\$3,876 (1983-84)
\$2,728 (1980-81)	\$4,269 (1984-85)

Science & Technology: Co-ordinator - Deborah DesRivieres 565-5782

The department was established January 1, 1984 to promote the role of research and scientific activities in the development of Saskatchewan. Specific activities in the social sciences include: Statistical surveys, information services and special services and studies. In the natural sciences departmental activities include: Information collection and dissemination, industrial counselling, policy formulation, administration of R&D incentive grants, statistical survey and special services and studies.

Social Services: Co-ordinator - M. Spigelman 565-3621

Most activities in this department are RSA and 80% are performed by the department itself. Projects are: program evaluation, development of management and research information systems, demonstration projects, measurement of the service needs of client groups and forecasting the demand for service.

Supply & Services: Co-ordinator - Kevin Taylor 565-2107

In the natural sciences the Central Survey and Mapping Agency includes 3 branches with R&D and RSA: Surveys Branch, Mapping Branch and Data and Research Branch. Management Services, Government Systems Centre reports RSA activity in the social sciences.

Tourism and Small Business: Co-ordinator - Peter Wyse 566-9549

Two private consulting firms carried out a survey of hotel occupancy in the province and surveyed residents of Saskatchewan to develop tourism statistics.

Urban Affairs: Co-ordinator - Denis Exner 565-2675

Municipal Finance Branch, Municipal Advisory Services Branch and Community Planning Branch report RSA in the social sciences. Almost one half of the scientific activities are conducted intramurally with industries, universities and the other sector performing the remainder.

Indicators of Provincial Scientific Activities

1. Population and Income

Province	Population January/84(1) (000)	Rank	Personal Income per capita 1982(2) (\$)	Rank	Provincial Gross Domestic Product per capita 1981(3) (\$)	Rank
Newfoundland	579	9	8,580	10	8,108	9
Prince Edward Island	125	10	8,894	9	7,945	10
Nova Scotia	866	7	10,090	7	9,582	7
New Brunswick	710	8	9,229	8	9,331	8
Quebec	6,529	2	12,021	5	12,748	6
Ontario	8,887	1	13,842	2	15,436	4
Manitoba	1,052	5	11,987	6	13,248	5
Saskatchewan	1,000	6	12,372	4	15,702	2
Alberta	2,345	4	14,025	1	22,624	1
British Columbia	2,852	3	13,811	3	15,678	3
Canada(4)	25,016		12,839		14,775	

(1) Canadian Statistical Review, Statistics Canada, Catalogue No. 11-003E, March 1984.

(2) National Income and Expenditure Accounts, 1968-1982, Statistics Canada, Catalogue No. 13-201.

(3) Provincial Economic Accounts, Experimental Data, 1967-1982, Statistics Canada, Catalogue No. 13-213.

(4) Includes the Yukon and Northwest Territories.

Indicators of Provincial Scientific Activities

2. Universities

Province	Graduate students per ten thousand population (15 years and over) 1982-83(1)	Sponsored research in universities per capita, 1982-83 (2)
	Rank	Rank
		(\$'000)
Newfoundland	13	21
Prince Edward Island	-	4
Nova Scotia	26	22
New Brunswick	10	17
Quebec	28	24
Ontario	28	31
Manitoba	26	31
Saskatchewan	12	19
Alberta	22	31
British Columbia	20	20
Canada	25	26

(1) Full-time enrolment for graduate degrees, per ten thousand population (15 years and over)
Universities Enrolment and Degrees, 1982-83, Statistics Canada, Catalogue No. 81-204, and Postcensal
 Estimate of Population by Sex and Age for Canada and the Provinces, June 1982, Population Estimates
 Section, Demography Division, Statistics Canada.

(2) **Financial Statistics of Universities and Colleges, 1982-83**, Canadian Association of University
 Business Officers.

Indicators of Provincial Scientific Activities

3. Industry

Province	Value added by manufacturing activity per capita, 1981(1)	Rank	Current intramural industrial R&D expenditures per employee in primary and secondary industry, 1982(2)	Rank
	(\$)		(\$)	
Newfoundland	951	8	--	9
Prince Edward Island	606	10	--	10
Nova Scotia	1,521	6	77	7
New Brunswick	1,454	7	67	8
Quebec	3,114	2	666	2
Ontario	4,169	1	900	1
Manitoba	1,943	4	181	6
Saskatchewan	824	9	208	5
Alberta	1,709	5	633	3
British Columbia	2,328	3	311	4
Canada(3)	2,954		662	

(1) Manufacturing Industries of Canada; National and Provincial Areas, 1981, Statistics Canada, Catalogue No. 31-203.

(2) Results of 1982 Industrial R&D survey, Science and Technology Statistics Division, Statistics Canada and The Labour Force, April, 1984, Statistics Canada, Catalogue No. 71-001.

(3) Includes the Yukon and Northwest Territories.

Indicators of Provincial Scientific Activities

4. Federal Government

Province	Expenditures on intramural natural science activities 1982-83(1)	Federal personnel 1982-83(1)	Contracts awarded by the Science Procurement Sector, Department of Supply and Services, 1983-84(2)
	(\$'000,000)	Person-years	No. (\$'000,000)
Newfoundland	34	406	183
Prince Edward Island	84	1,597	32
Nova Scotia	5	114	447
New Brunswick	34	315	156
Quebec	98(3)	1,546(3)	399
Ontario	209(4)	4,407(4)	1,533
Ottawa-Hull	583	10,727	...
Manitoba	96	1,637	119
Saskatchewan	32	686	71
Alberta	64	1,308	254
British Columbia	88	1,673	842
Canada(5)	1,328	24,452	4,060
			256

(1) "Federal Scientific Establishments, 1982-83", Science and Technology Statistics Division, Statistics Canada.

(2) Research and Development Bulletin, April 1984, Supply and Services.

(3) Excluding Hull.

(4) Excluding Ottawa.

(5) Includes the Yukon and Northwest Territories.

Indicators of Provincial Scientific Activities

5. Provincial Research Organizations

Province	Total expenditures on science and technology, 1983(1) (\$'000)	Rank
Nova Scotia	5,380	8
New Brunswick	5,870	6
Quebec	19,366	2
Ontario	18,686	3
Manitoba	5,704	7
Saskatchewan	10,294	4
Alberta	37,373	1
British Columbia	7,905	5
Total	110,578	

(1) "The Provincial Research Organizations, 1983", Science Statistics, Vol. 8, No. 11, Statistics Canada, Catalogue No. 88-001.

Indicators of Provincial Scientific Activities

6. Provincial Distribution of R&D, by Performing Sector, 1982(1)

Province	Federal Government	Provincial Government	Provincial research organizations	Total government	Industry	University	Private non-profit	Total
	(\$'000,000)							
Newfoundland	28	1	-	29	1	21	-	51
Prince Edward Island	6	-	-	6	-	-	-	6
Nova Scotia	58	1	3	62	10	38	-	110
New Brunswick	26	-	2	28	5	19	-	52
Quebec	107	23	9	139	559	261	14	973
Ontario	588	48	12	648	1,349	325	26	2,348
Manitoba	82	1	2	85	26	43	2	156
Saskatchewan	28	3	4	35	38	41	-	114
Alberta	59	23	21	103	255	114	2	474
British Columbia	59	13	4	76	122	91	1	290
Canada(2)	1,042	113	57	1,212	2,381	953	45	4,591

(1) Gross Domestic Expenditures on R&D by Region, 1979-1982, Science and Technology Statistics Division, Statistics Canada.

(2) Includes the Yukon and Northwest Territories.

NOTE: Totals may not add due to rounding.

Indicators of Provincial Scientific Activities

7. Provincial Distribution of R&D, by Funding Sector, 1982(1)

Province	Federal Government	Provincial Government	Provincial research organizations	Total government	Industry	University	Private non-profit	Total(3)
	(\$'000,000)							
Newfoundland	35	2	-	37	1	11	2	51
Prince Edward Island	6	-	-	6	-	-	-	6
Nova Scotia	77	2	-	79	9	21	-	110
New Brunswick	35	2	-	37	5	10	-	52
Quebec	252	78	1	331	444	128	23	973
Ontario	873	116	1	990	1,082	116	44	2,348
Manitoba	105	8	-	113	21	14	5	156
Saskatchewan	46	10	-	56	31	23	1	114
Alberta	115	76	-	191	203	54	5	474
British Columbia	110	21	-	131	99	43	6	290
Canada(2)	1,655	313	3	1,971	1,908	421	86	4,591

(1) Gross Domestic Expenditures on R&D by Region, 1979-1982, Science and Technology Statistics Division, Statistics Canada.

(2) Includes the Yukon and Northwest Territories.

(3) Includes Foreign sources of funds.

NOTE: Totals may not add due to rounding.

Indicators of Provincial Scientific Activities

8. Gross Domestic Expenditures on Research and Development, in Saskatchewan, 1982 Natural Sciences and Engineering

Funding sector	Performing sector						Total			
	Government				Business enterprise	Higher education		Private non-profit		
	Federal			Provincial					PRO	Total
	Federal									
\$000,000										
Governments										
Federal	28	-	1	29	4	13	-	46		
Provincial	-	3	2	5	1	4	-	10		
PRO	-	-	-	-	-	-	-	-		
Sub-total	28	3	3	34	5	17	-	56		
Business enterprise	-	-	1	1	30	-	-	31		
Higher education	-	-	-	-	-	23	-	23		
Private non-profit	-	-	-	-	-	1	-	1		
Foreign	-	-	-	-	3	-	-	3		
Total	28	3	4	35	38	41	-	114		

Cells may not sum to totals due to rounding.

Source: Science and Technology Statistics Division, April 1984.

Provincial Co-ordinators

Five provincial governments sponsored the Science and Technology Statistics Division in the collection of similar scientific activity data. Below is a list of co-ordinators for the various sponsoring departments/ministries.

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Co-ordinator - Science & Technology
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Mr. Gordon Stokell
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Mr. Dale W. Botting
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Dr. Beataan Heembergen
Director
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Mr. B. Stevenson
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In August 1983, Statistics Canada formed a Science and Technology Statistics Division with staff from both Statistics Canada and the Ministry of State for Science and Technology. The basic mission of the Division is to assure the availability of pertinent statistical information in support of the development of science and technology in Canada.

Activities of the Division are described in a semi-annual report distributed free of charge entitled **Activities of the Science and Technology Statistics Division**. This report is published in June and December each year (first issue June 1984).

Information is disseminated in a series of reports including monthly service bulletins, occasional background papers and annual reports which are described below.

Catalogued

- 88-001 Science Statistics
- 88-201 Science and Technology Indicators, 1984
- 88-202 Industrial Research and Development Statistics, 1982
- 88-203 Resources for Research and Development in Canada, 1982
- 88-204E Federal Scientific Activities, 1984-85
- 88-502E International Payments and Receipts for Technology
- 88-503E Technology and Commodity Trade
- 88-505E Industrial Productivity and Research and Development Indicators
- 88-506E A Framework for Measuring Research and Development Expenditures in Canada
- 88-507E An Indicator of Excellence in Canadian Science: Summary Report

Uncatalogued

- Federal Government Expenditures on Activities in the Natural Sciences 1963-64 to 1984-85
- Federal Government Expenditures on Activities in the Social Sciences and Humanities 1970-71 to 1984-85
- Federal Personnel Engaged in Scientific Activities 1976-77 to 1984-85
- Federal Science Expenditures and Personnel 1984-85
- Federal Scientific Establishments 1982-83
- Gross Domestic Expenditures on R&D, by Region, 1979-1982
- Calculation of R&D Expenditures in the Higher Education Sector, by Province, 1982

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